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ABSTRACT

This report defines school refusal behavior as the refusal to attend school or difficulties going to school or remaining in school for the entire day, and sees school refusal as a significant problem that may occur in 8% of all school-aged children. It discusses difficulties of previous classification and assessment strategies for students who refuse to attend school. A proposed functional model for assessing and treating children and adolescents with school refusal behavior is outlined in which the focus is on why children refuse to attend school. This model hypothesizes that children refuse to attend school for negative reinforcement, such as avoiding stimuli within a school setting that provoke negative affectivity, and/or positive reinforcement, such as pursuing rewarding stimuli outside the school setting such as playing, being with friends, or parental attention. Preliminary data from 42 children with difficulties attending school, 42 mothers, and 29 fathers are presented which support the functional model. Included are reliability and validity data for the School Refusal Assessment Scale, an instrument designed to measure the function of school refusal behavior. A second report looks at whether the functional model can accurately predict the effectiveness of a specific, prescriptive, therapeutic strategy for a child with school refusal behavior. (NB)

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ASSESSING THE DETERMINANTS OF SCHOOL REFUSAL BEHAVIOR

[Christopher Kearney] [Wendy Silverman]

I. Welcome

II. Introduction to topic

Definition of school refusal behavior will be a refusal to attend school or difficulties going to school or remaining in school for the entire day. This is a significant problem since it may occur in up to 8% of all school-aged children.

III. What will be discussed?

1. Difficulties of previous classification and assessment strategies for this population.
2. Outline a proposed functional model for assessing and treating children and adolescents with school refusal behavior.
3. Present preliminary data to support the functional model, including reliability and validity data for the School Refusal Assessment Scale, an instrument designed to measure the function of school refusal behavior.

IV. Why is this topic important?

1. In the short-term, school refusal-related problems create severe distress both in the child and family members, and significantly interfere with normal daily functioning (example).

2. In the long-term, school-refusal-related problems lead to a need for psychiatric services later in adulthood in over 40% of cases, significant social problems in over 50% of cases, a higher risk for agoraphobia later in adulthood, in addition to the obvious implications for not finishing school including difficulties in occupational settings.

   Several researchers have reported, however, that no long-term problems exist if the situation is resolved quickly.

Although important for children, families, and educators (including those who lose funding for student nonattendance), the treatment of school refusal behavior remains a relatively neglected area of social clinical practice.

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In addition, we expected that, in general, children with negatively reinforced school refusal behavior would tend to meet criteria for more traditional psychiatric disorders related to fear, anxiety, and depression on a semistructured interview given to children and parents, the Anxiety Disorders Interview Schedule for Children (Silverman & Nelles, 1988).

In general, this was true (SLIDE SEVEN). Children self-rated with negatively reinforced school refusal behavior were also diagnosed with internalizing disorders (i.e., other than SAD or NMD) in 66.0% of the cases and these accounted for 83.3% of the total given.

Conversely, those children rated highest on positively reinforced school refusal behavior were expected to meet criteria for more disorders encompassing acting-out or externalizing behavior problems than children with negatively reinforced school refusal behavior on the semistructured interview given to children and parents. It was also hypothesized that children with positively reinforced school refusal behavior would be more likely to receive no diagnosis, reflecting a so-called "truant" population not typically associated with problems of fearfulness or anxiety.

In general, children self-rated with positively reinforced school refusal behavior were diagnosed with SAD or NMD in 85.7% of the cases and these diagnoses accounted for 72.0% of the total given.

Finally, we expected that diagnoses assigned on the basis of parent reports would follow similar trends (SLIDE EIGHT). In general, this was also true. Parents who had rated their children with negatively reinforced school refusal behavior indicated that the children met criteria for internalizing disorders in 58.8% of the cases and these diagnoses accounted for 77.1% of the total given. In addition (SLIDE NINE), parents who had rated their children with positively reinforced school refusal behavior indicated that the children also met criteria for externalizing behavior disorders (i.e., SAD, ADD, OPP, CON, or NMD) in 72.7% of the cases.

To assess concurrent validity, we attempted to compare functional dimensions of behavior to individual keystone behaviors, which we recognize is a difficult task. In general, however, it was hypothesized that scores on child self-report measures of negative affectivity (e.g., CMAS-R, CDI, Piers-Harris) would be most highly correlated with the negative reinforcement dimension of school refusal behavior, since these children would be more likely than children with positively reinforced school refusal behavior to avoid stimuli provoking negative affect (SLIDE SIX).

Measures of negative affectivity (e.g., anxiety, depression, low self-esteem) were generally highly correlated among children rated as avoidant of aversive stimuli within or related to the school settings. Surprisingly, levels of fearfulness as measured by the Fear Survey Schedule were correlated most with attention-getting behavior. This finding may be confounded by the fact that children of the attention-getting group were the youngest (8.2 years), therefore presenting with more developmentally appropriate (i.e., not necessarily school-related) fears. Children in the first two functional conditions (negative reinforcement) did tend to report more depression, less self-esteem, and greater social anxiety (especially for functional condition two) than children with positively reinforced school refusal behavior.

Similarly, it was generally expected that children with negatively reinforced school refusal behavior would be rated by their parents and teachers as having more severe internalizing problems (i.e., those related to negative affect or distress). This was shown for teachers, but parents reported internalizing behavior problems across all functional conditions.

Conversely, it was expected that children with school refusal behavior maintained by positive reinforcement would be rated by parents and teachers as having more severe acting-out or other externalizing behavior problems compared to children with negatively reinforced school refusal behavior. For example, a child wishing to remain home for positive tangible reinforcement may be more noncompliant and oppositional toward increased parent commands to attend school and teacher commands to remain in school. In general, externalizing behavior problems were most associated with the positive reinforcement functional conditions and not with children avoiding school for negative reinforcement.

This neglect is partially due to the problems of traditional classification, assessment, and treatment strategies for this population, many of which have not considered the varied or heterogeneous nature of school refusal behavior and have failed to outline prescriptive treatment approaches, or those that will be most effective for one particular child with school refusal behavior.

V. The traditional classification of school refusal behavior

The earliest conceptualizations of school refusal advocated a psychodynamic approach, proposing that overdependency on the part of the mother and child resulted in the development of a severe anxiety response from both parties upon separation and, subsequently, refusal to attend school. For several years, the resulting concepts of "school phobia" or "separation anxiety" were the predominant explanations for school refusal behavior.

During the 1960's and 1970's, several authors advocated a move toward dichotomizing school refusal behavior. For example, Kennedy separated children with school refusal behavior into Type I and Type II categories, distinguishing children on the basis of acute vs. chronic and less severe vs. severe types of school refusal. Other dichotomizing classification systems focused on "common and induced," "neurotic and characterological," and "ego-alien and ego-syntonic" school refusal behavior.

Within the past 10-15 years, the classification of school refusal behavior has shifted toward empirical or diagnostic methods. Achenbach, for example, developed an empirical classification system of childhood behavior disorders based on a factor analysis of parent ratings of child behavior. Groups of factors or groups of behaviors were specified for boys and girls, and an overall internalizing vs. externalizing dimension was developed for both genders and all age groups. School refusal behavior is represented in several of the categories, albeit indirectly.

Last and her colleagues and Bernstein and her colleagues have attempted to classify school refusal behavior via DSM-III-R diagnostic categories. Last, for example, concluded that school phobia and separation anxiety disorder may be separate categories of school refusal. Similarly, Bernstein has advocated a classification system of school refusal focusing on the presence of an anxiety disorder, an affective disorder, both, or neither.

VI. Problems with traditional classification strategies

Despite their promise, several problems are inherent in many of these classification systems:

1. Many of the early approaches were based upon clinical consensus, not empirical evidence. Several focused predominantly on intrapsychic or internal factors, evaluating only the child and not his or her interpersonal relationships or social reinforcement systems.

2. The validity of the newer approaches, as applied to school refusal, remains controversial. No criteria exist, for example, for determining whether a child with school refusal behavior is avoiding school or simply wishes to remain home. The diagnostic system has also been criticized for difficulty in determining primary diagnostic criteria and poor contribution to knowledge of treatment outcome.

3. Many studies of classification of school refusal have overrelied on the use of unstructured clinical interviews to obtain intake information or have relied on diagnostic categories that are not pathognomonic or even highly representative of school refusal behavior.

4. One of the most severe problems of traditional classification approaches (and related assessment procedures) for this population is the lack of appropriate measures shown to contribute to positive therapeutic efficacy, or adequate treatment utility. Given the heterogeneity of this population, it is unfortunate that the proper identification of subtypes based on a functional analysis of behavior has not been conducted.

   A distinct need exists for theory-oriented research in this area that will interface assessment and treatment and provide clinicians with recommendations for prescriptive treatment strategies, i.e., which treatment will work best for a particular child with school refusal.

VII. A functional model of assessing school refusal behavior

In response to these concerns, we have attempted to shift again the focus of classifying school refusal behavior, this time toward a more functional approach, focusing on why children refuse school and less on the topographical behaviors per se.

Specifically, we have hypothesized that children generally refuse school for negative reinforcement, such as avoiding stimuli within a school setting that provoke negative affectivity, and/or positive reinforcement, such as pursuing rewarding stimuli outside the school setting such as playing, being with friends, or parental attention.

In light of this hypothesis, we have collected initial data on an instrument designed to assess these motivating conditions in children with school refusal, the School Refusal Assessment Scale. The SRAS is based on clinical and research evidence that children refuse or have difficulty attending school for a variety of reasons related to negative and positive reinforcement, namely (SLIDE ONE):

(1) avoidance of stimuli provoking negative affectivity (e.g., fearfulness, general anxiety, depression, low self-esteem)
(2) escape from aversive social or evaluative situations
(3) attention-getting behavior, and/or
(4) positive tangible reinforcement.

The first two conditions describe children who refuse school for negative reinforcement, whereas the latter two functional conditions describe attempts to refuse school for positive reinforcement, typically (although not always) from home.

VIII. Reliability and validity of the SRAS

To evaluate the reliability and validity of the SRAS, we examined 42 subjects with difficulties attending school or refusal to attend school for less than one year. The sample consisted of 26 boys and 16 girls with a total mean age of 11.26 years. 42 mothers and 29 fathers were also evaluated.

Sixteen questions, four per maintaining condition, comprised the SRAS. Each question is rated on a Likert-type scale of 0 to 6, from never to always. Equivalent child and parent versions have been developed. The scale is administered to both parties separately, after which means for each condition are computed and ranked. The highest-scoring condition is considered to be the primary maintaining variable of school refusal behavior for a particular child. Functional conditions averaging 0.25 points of one another are considered equal.

To assess test-retest reliability, we assessed subjects at an initial assessment session and again 7-14 days later. Interrater reliability was assessed for the parent scale only and whenever the mother and father were present at either assessment session (n = 41). The scale was generally found to be reliable across time and parent raters (SLIDE TWO).

Questions 1, 5, 9, 13 - avoidance of stimuli provoking neg aff
Questions 2, 6, 10, 14 - escape aversive soc/eval situations
Questions 3, 7, 11, 15 - attention-getting behavior
Questions 4, 8, 12, 16 - positive tangible reinforcement

To assess construct validity, we hypothesized that item and subsection scores reflecting negatively and positively reinforced school refusal behavior should be clearly distinctive via a principal components factor analysis with varimax rotation. We found that such an analysis of total mean scores for the four functional conditions did support such a distinction (SLIDE THREE).

With regard to individual items, we were able to show a preliminary distinction within positively reinforced school refusal behavior (i.e., attention-getting behavior vs. positive tangible reinforcement) but not negatively reinforced school refusal behavior (i.e., avoidance of stimuli provoking negative affect vs. escape from aversive social or evaluative situations) (SLIDE FOUR/FIVE).

IX. Discussion

We view these data as the first to support the classification and assessment of school refusal behavior based upon a functional approach. It was demonstrated that an instrument designed to measure child and parent ratings of the function of school refusal behavior could do so on a consistent basis. In addition, construct and concurrent validity were established on a preliminary basis.

It is important to consider the fact, however, that many children with school refusal behavior do not fit clearly into one functional condition. Approximately one-fourth of our sample refuse school for both negative and positive reinforcement. Many children, for example, are initially fearful (e.g., of a school bus) or anxious (e.g., in social situations) but are subsequently rewarded by parents or school personnel who allow the child tangible and intangible rewards (e.g., attention, watching television) to ease his/her discomfort or as an enticement for school attendance.

Conversely, many children miss prolonged periods of school for attention or other rewards and subsequently become distressed over the possible consequences of returning to school (e.g., new teacher and classroom, meeting new people, adjustment to different curricula). In either case, children may refuse school for negative and positive reinforcement.

An important implication of this is that it may be useful to explore "profiles" of school refusal behavior based upon a functional analysis. For example, children with positively reinforced school refusal behavior may require prescriptive treatment not only for this problem, but for clinically significant problems with negative affectivity as well.

The School Refusal Assessment Scale may thus become a useful clinical tool for establishing the maintaining variables of school refusal behavior and assist in the development of a prescriptive therapeutic approach. The assessment of other, possibly influential, variables (e.g., age, depression) may be helpful in refining the overall course of treatment and increasing our knowledge of school refusal behavior profiles. The functional approach presented here addresses important deficiencies in the classification and assessment of this population, including its basis on clinical and empirical evidence, reliability and validity, solicitation of multiple sources, and the ability to recommend prescriptive treatment approaches.

Future research in the classification and assessment area will focus upon a clearer distinction between groups of items representing different functional conditions, an analysis of other potential motivating variables, the development of a strong teacher version of the SRAS, and the treatment utility of the functional approach, a subject that will be discussed next.

Functional conditions measured by the

School Refusal Assessment Scale

Negative reinforcement

1. Avoidance of stimuli provoking negative affectivity.
2. Escape from aversive social or evaluative situations.

Positive reinforcement

3. Attention-getting behavior.
4. Positive tangible reinforcement.

Reliability data for the child and parent versions of the SRAS

Question	Child test-retest	Parent test-retest	Parent interrater
1	.40* (24)	.71** (35)	.69** (39)
5	.67** (23)	.59** (37)	.49** (41)
9	.59** (23)	.26 (29)	.09 (35)
13	.71** (24)	.73** (35)	.22 (41)
2	.91** (24)	.48** (36)	.58** (39)
6	.62** (24)	.61** (37)	.47** (40)
10	.76** (24)	.69** (37)	.64** (41)
14	.56** (24)	.80** (37)	.61** (41)
3	.56** (24)	.64** (37)	.39* (41)
7	.78** (24)	.83** (37)	.61** (41)
11	.66** (22)	.77** (37)	.24 (41)
15	.46* (24)	.79** (36)	.56** (40)
4	.44* (24)	.73** (36)	.53** (40)
8	-.06 (24)	.69** (36)	.59** (41)
12	.42* (24)	.57** (35)	.58** (39)
16	.89** (22)	.60** (35)	.27 (40)

NOTES: ** $p < .01$; * $p < .05$.

Principal components of the SRAS per functional condition

Functional condition	Loading
Factor 1	
(Negative reinforcement)	
1 (avoidance of fear/anxiety-provoking stimuli)	.83
2 (escape from aversive social/evaluative situations)	.81
Factor 2	
(Positive reinforcement)	
3 (attention-getting behavior)	.70
4 (positive tangible reinforcement)	.88

Principal components of the SRAS per question

Question number and functional condition	Loading
Factor 1	
(Negative reinforcement)	
1 (1) (fear of something in school building)	.67
2 (2) (trouble speaking with others at school)	.77
5 (1) (afraid of teachers or others at school)	.78
6 (2) (embarrassed or scared in front of others at school)	.77
9 (1) (more nervous with friends at school)	.65
10 (2) (trouble making friends)	.62
13 (1) (scared of school on Saturday and Sunday)	.40
14 (2) (avoid places where have to talk to someone)	.32

Factor 2

(Positive reinforcement - attention-getting)

7 (3) (rather be with parents than in school)	.77
11 (3) (think about parents or family when in school)	.82
15 (3) (refuse school to be with parents)	.82

Factor 3

(Positive tangible reinforcement)

3 (3) (do things to upset or annoy family)	.26
4 (4) (go out of house when not in school during week)	.75
8 (4) (talk to or see other people when not in school)	.86
12 (4) (enjoy doing different things when not in school)	.81
16 (4) (skip school because more fun to be out of school)	.13

Correlations between SRAS-C, SRAS-P, or SRAS-T conditions and respective child, parent, and teacher measures

	SRAS conditions			
Measure	1	2	3	4
Fear Survey Schedule for Children	.04	.17	.46**	.18
Children's Manifest Anxiety Scale	.31	.19	.39*	.06
State-Trait Anxiety Inventory	.33*	.44**	.34*	-.02
Children's Depression Inventory	.33*	.36*	.22	-.03
Piers-Harris Self-Concept Scale	-.31*	-.46**	-.17	-.15
Social Anxiety Scale for Children	.12	.43**	-.03	-.08
Child Behavior Checklist				
- Internalizing T	.35*	.39**	.54**	.33*
- Externalizing T	-.13	.18	.42*	.48**
Teacher Report Form				
- Internalizing T	.48*	.74**	.15	-.20
- Externalizing T	.12	.18	.31	.14

NOTES: ** $p < .01$; * $p < .05$.

SRAS condition 1: Avoidance of negative affectivity stimuli.

SRAS condition 2: Escape aversive social/evaluative settings.

SRAS condition 3: Attention-getting behavior.

SRAS condition 4: Positive tangible reinforcement.

Comparisons of children rated with either negatively or positively reinforced school refusal behavior on the SRAS across diagnoses as reported by children and parents

Child-reported diagnoses - Negatively reinforced school refusal	
Avoidant disorder	6 (25.0%)
Overanxious disorder	5 (20.8%)
Social phobia	4 (16.7%)
Major depression	3 (12.5%)
Agoraphobia	2 (8.3%)
Separation anxiety disorder	1 (4.2%)
No mental disorder	3 (12.5%)

NOTE: n = 10.

Child-reported diagnoses - Positively reinforced school refusal	
Separation anxiety disorder	4 (16.0%)
Simple phobia	3 (12.0%)
Overanxious disorder	3 (12.0%)
Major depression	1 (4.0%)
No mental disorder	14 (56.0%)

NOTE: n = 21.

Parent-reported diagnoses - Negatively reinforced school refusal

Overanxious disorder	9 (25.7%)
Avoidant disorder	5 (14.3%)
Social phobia	5 (14.3%)
Simple phobia	3 (8.6%)
Major depression	3 (8.6%)
Separation anxiety disorder	2 (5.7%)
Oppositional disorder	2 (5.7%)
Attention deficit disorder	1 (2.9%)
Schizophrenia	1 (2.9%)
Sleep terror disorder	1 (2.9%)
No mental disorder	3 (8.6%)

NOTE: n = 17.

Parent-reported diagnoses - Positively reinforced school refusal

Overanxious disorder	14 (35.9%)
Separation anxiety disorder	8 (20.5%)
Avoidant disorder	3 (7.7%)
Attention deficit disorder	3 (7.7%)
Oppositional disorder	3 (7.7%)
Simple phobia	2 (5.1%)
Social phobia	1 (2.6%)
Major depression	1 (2.6%)
Conduct disorder	1 (2.6%)
No mental disorder	3 (7.7%)

NOTE: n = 22.

DECREASING SCHOOL REFUSAL BEHAVIOR THROUGH THE ASSESSMENT AND WITHDRAWAL OF ITS MAINTAINING VARIABLES

I. Introduction

As has been mentioned, a functional model of classifying and assessing children and adolescents with school refusal behavior has been supported on a preliminary basis. To fully evaluate the efficacy of a functional assessment-treatment interface approach for school refusal behavior, however, one must examine whether such a model can accurately predict the effectiveness of a specific, prescriptive therapeutic strategy for one person with school refusal behavior.

II. What will be discussed?

1. A brief review of conclusions and criticisms applicable to traditional treatment approaches for school refusal behavior.

2. An outline of the methodology we have used to evaluate the treatment utility of the functional model.

3. A summary of preliminary results supporting the efficacy of this approach.

4. A brief discussion of the implications of this model for future research.

III. Conclusions and criticisms of past treatment studies

Several conclusions and criticisms may be drawn about the clinical treatment of school refusal behavior in children and adolescents:

1. It is clear that many different treatments have been used with this population. Earlier interventions primarily involved psychoanalytically-oriented treatments of "separation anxiety," whereas the predominant treatment during the late 1960's and 1970's was systematic desensitization of specific fears related to the school setting, reflecting the conceptualization of school refusal as "school phobia."

A recent national survey of general child- and family-oriented clinicians indicated that an extreme variety of treatments are utilized for this population, including systematic desensitization with and without in vivo exposure; relaxation training; forced school attendance; cognitive restructuring with and without in vivo exposure; modeling/role-play; parent training including contingency management, shaping, and differential reinforcement of other behavior; contingency/behavioral contracting; play therapy; pharmacotherapy; as well as a variety of eclectic child- and family-oriented treatments.

This survey indicates that clinicians employ a heterogeneous repertiore of techniques to treat children with school refusal behavior, reflecting the population's wide variety of behaviors. As a result, a distinct need exists to examine the effectiveness of prescriptive, individualized therapeutic strategies to provide guidelines for the treatment of one person with school refusal behavior.

Unfortunately, almost no studies have examined client characteristics that may or may not enhance treatment efficacy. Assigning appropriate treatment on the basis of maintaining variables of school refusal behavior, for example, has not been adequately examined.

2. One characteristic of previous treatment studies for school refusal behavior is the poor design and use of adequate assessment procedures. For example, the criteria used for positive therapeutic outcome has been extremely inconsistent across studies except for school attendance figures. No studies have utilized within- or between-session measures of anxiety, depression, or overall negative affectivity.

In addition, the majority of intake and treatment progress assessments are of unknown reliability and validity. There is, for example, an overreliance on unstructured interviews to obtain initial information about a client's problem. In addition, information is often collected from one source, the parents, and so social validity is limited.

As a result, a need exists not only to examine a prescriptive treatment approach for children with school refusal behavior, but also one that utilizes empirically-based measures to evaluate such an approach. The purpose of two initial studies that we have conducted was to address these issues while examining the efficacy of the functional model presented earlier.

IV. A preliminary analysis of the functional model

To address these problems and evaluate the treatment utility of the functional model of school refusal behavior, we initially conducted a preliminary study of prescriptive treatment efficacies.

Our initial evaluation of the treatment utility of the functional model involved the assessment and treatment of 5 males and 2 females with an overall mean age of 12.5 years. All had experienced difficulty attending school or were refusing to attend school for less than one year. The subjects had missed an average of 25 (or 22%) of school days since the beginning of the school year at the time of assessment (range 6-80 days).

The assessment procedure consisted of the following:

Child self-report

1. The Fear Survey Schedule for Children-Revised, a measure of general fearfulness of 80 items.

2. The Child Manifest Anxiety Scale-Revised, a measure of general anxiety.

3. The State-Trait Anxiety Inventories for Children, another measure of general and situation-specific anxiety.

4. The Social Anxiety Scale for Children, a 10-item scale that assesses children's level of social anxiety.

Parent report

5. The Child Behavior Checklist, a scale widely used to assess social competency and internalizing and externalizing behavior problems in children.

Child, parent, and teacher report

6. All children, parents, and teachers were asked to complete equivalent versions of the School Refusal Assessment Scale, the instrument described earlier that evaluates the degree to which different motivating functional conditions serve to maintain school refusal behavior.

Subjects were assigned treatment based upon a combined (i.e., from child, parents, and teacher) mean score from the School Refusal Assessment Scale. Prescriptive treatment was assigned in accordance with the highest mean score of any of the four conditions outlined earlier, provided that score was at least 0.25 points higher than any other condition. For example, if the total mean scores across the child, parent, and teacher versions of the SRAS were 4.00, 3.50, 2.00, and 1.00, respectively, than prescriptive treatment would be assigned on the basis of the first condition.

Subject 1 was assigned presciptive treatment (i.e., systematic desensitization with relaxation training) based on the first functional condition (i.e., avoidance of stimuli provoking negative affectivity).

Subjects 2-5 were assigned prescriptive treatment (i.e., cognitive restructuring and modeling/role-play exercises) based on the second functional condition (i.e., escape from aversive social/evaluative situations).

Subject 6 was assigned prescriptive treatment (i.e., parent training via shaping and differential reinforcement of other behavior) based on the third functional condition (i.e., attention-getting behavior).

Subject 7 was assigned prescriptive treatment (i.e., contingency contracting) based on the fourth functional condition (i.e., positive tangible reinforcement).

In addition, children and parents were required to keep daily logbooks indicating levels of anxiety, depression, and general distress on a 0-4 scale. Parents also indicated levels of school attendance. The therapist also obtained Subjective Units of Discomfort (SUDS) (0-100) scale scores from the child of his/her school day at each treatment session.

Positive end-state functioning was defined as 90% school attendance for at least two weeks (excluding legitimate physical illness) and/or 75% decrements in levels of anxiety, depression, and overall distress by posttreatment. Treatment consisted of 1-2, 30-45-minute treatment sessions per week for a maximum of four weeks.

Results

Treatment effectiveness was evaluated via school attendance, improvements on child self-report measures and daily ratings, and parent questionnaires and daily ratings. With respect to attendance, 6 of the 7 subjects returned to school on a full-time basis for a minimum of two weeks by posttreatment, thus meeting criteria for positive end-state functioning.

With respect to child and parent reports (SLIDE), subjects generally improved on each measure, but particularly for those most specific to that functional condition. For example, Subjects 2-5, those refusing school to escape aversive social/evaluative situations, showed a 29% decrease in social anxiety compared to a 28% increase in the other subjects. Similar sharper improvements were seen in Subjects 1, 6, and 7 for general anxiety, separation problems, and externalizing behavior, respectively.

Discussion

Preliminary data was thus collected to demonstrate that an a priori assessment approach is useful for predicting which treatment strategy will work best for a particular type of child with school refusal behavior. It was also found that the degree of improvement was related to the consistency of scores across child, parent, and teacher raters. Still, composite SRAS scores were able to predict overall treatment success in 6 of the 7 subjects.

V. A controlled analysis of the functional model

One of the key problems of the preliminary study was that it was uncontrolled. We could not, for example, conclude that SRAS scores can accurately predict responsiveness to prescriptive treatment and inadequate behavior change from nonprescriptive treatment. As a result, we are currently in the midst of conducting this controlled analysis and would like to present the preliminary results.

The methodology for the controlled analysis of the functional model is similar to that of the earlier study, except control subjects received inappropriate therapeutic procedures based upon the lowest mean score on the SRAS. Control subjects will receive the same number of inappropriate treatment sessions required for successful outcome in the experimental group, who will receive only appropriate treatment. Two additional inappropriate treatment sessions will be added to the control group regimen to assess whether school refusal behavior is simply subject to immediate treatment effects. All control subjects subsequently received appropriate, prescriptive treatment. The controlled evaluation will thus be conducted across a multiple baseline design.

Measures used for the initial study will be used again, except that child and parent ratings of anxiety and depression are now rated on a 0-10 scale. Also, the assessment of overall day is now measured where 0 = very bad and 10 = very good. The Children's Depression Inventory was also used, as well as teacher reports of internalizing and externalizing behavior (i.e., Teacher Report Form). Similar criteria are used for positive end-state functioning. Assignment to prescriptive treatment was applied only if the highest functional condition was scored 0.50 points higher than the second-highest-scoring condition.

Results on pre- and post-treatment measures indicated that, to date, five subjects have met criteria for positive end-state functioning (SLIDE). All returned to school on a full-time basis, four with significantly lower levels of distress. In addition, results for two control subjects indicated that neither met criteria for positive end-state functioning following the conclusion of the inappropriate treatment period, but did so following appropriate treatment.

This study represents the first controlled analysis of prescriptive treatment of school refusal behavior based on a functional model of assessment. The present results provide initial support for the utility of this model and suggest that an a priori assessment approach may be useful to predict which treatment strategy will work best or minimally for a specific type of child with school refusal behavior. The present study indicates that the modification of school refusal behavior can be immediate or delayed, depending upon whether prescriptive or nonprescriptive treatment was assigned.

In closing, we present a functional model of school refusal behavior, given its preliminary and anticipated full controlled support, as one with important clinical and research implications. These include the lessened need for divergent and extensive clinical approaches, and a guidance toward individual differences that impact strongly on therapeutic outcome. The model also provides an alternative method of classifying one particular behavior problem in children which may eventually be generalized to other difficulties as well.

Means for each dependent measure at pre- and posttreatment

Measure	Pretreatment	Posttreatment
Fear Survey Schedule-Children (R)	136.4	128.9
Children's Manifest Anxiety Scale (R)	11.4	10.4
State-Trait Anxiety Inventory (State)	32.0	30.0
State-Trait Anxiety Inventory (Trait)	38.7	35.6
Social Anxiety Scale-Children	9.6	8.3
Child SUDS (0-100)	33.6	9.3
Child daily distress ratings (0-4)	1.7	1.0
Child Behavior Checklist (Internalizing T)	67.6	61.7
Child Behavior Checklist (Externalizing T)	58.9	54.1
Parent ratings of child daily distress (0-4)	0.9	0.5

Means for each dependent measure at pre- and posttreatment

Measure	Pretreatment	Posttreatment
Fear Survey Schedule-Children (R)	144.2	127.0
Children's Manifest Anxiety Scale (R)	14.4	12.4
Social Anxiety Scale for Children	9.2	9.4
Children's Depression Inventory	14.4	13.2
Child Behavior Checklist (Internalizing T)	73.6	71.0
Child Behavior Checklist (Externalizing T)	62.8	59.0
Teacher Report Form (Internalizing T)	60.6	59.0
Teacher Report Form (Externalizing T)	49.2	49.4
Child ratings of daily anxiety (0-10)	4.3 (4.1)	1.0
Child ratings of daily depression (0-10)	2.6 (1.8)	1.4
Child ratings of overall day (10-0)	6.1 (6.5)	7.7
Child SUDS (0-100)	16.0 (18.5)	9.8
Parent ratings of child's anxiety (0-10)	4.8 (4.9)	0.9
Parent ratings of child's depression (0-10)	2.5 (3.3)	1.4
Parent ratings of child's overall day (10-0)	5.9 (6.7)	8.4

NOTE: Parentheses indicate mean scores during the nonprescriptive (control) treatment period.